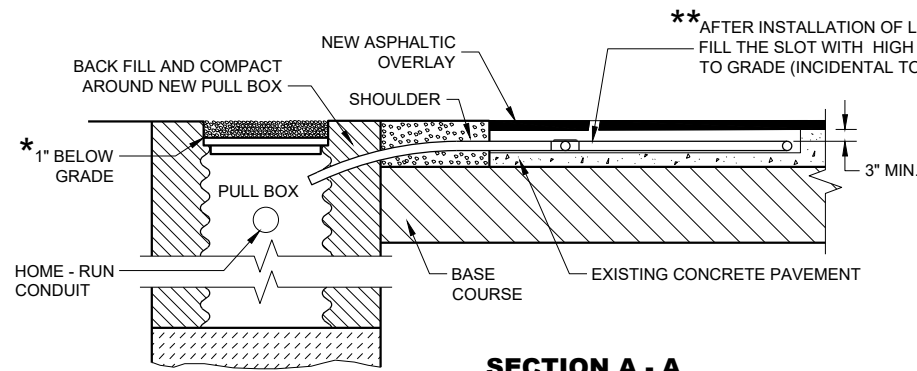


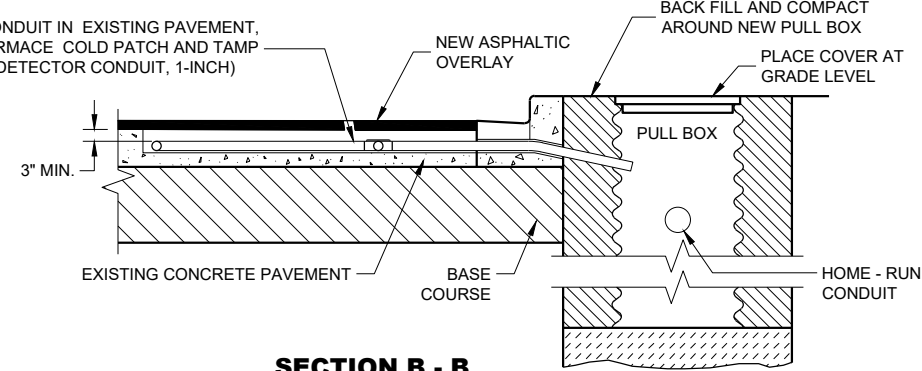
SDD 09F11 Loop Detector Installed in Existing Concrete Pavement with New Asphaltic Overlay



**SECTION A - A
NO CURB AND GUTTER**

LOOP DETECTOR INSTALLATION DETAIL

* RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



**SECTION B - B
CURB AND GUTTER**

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

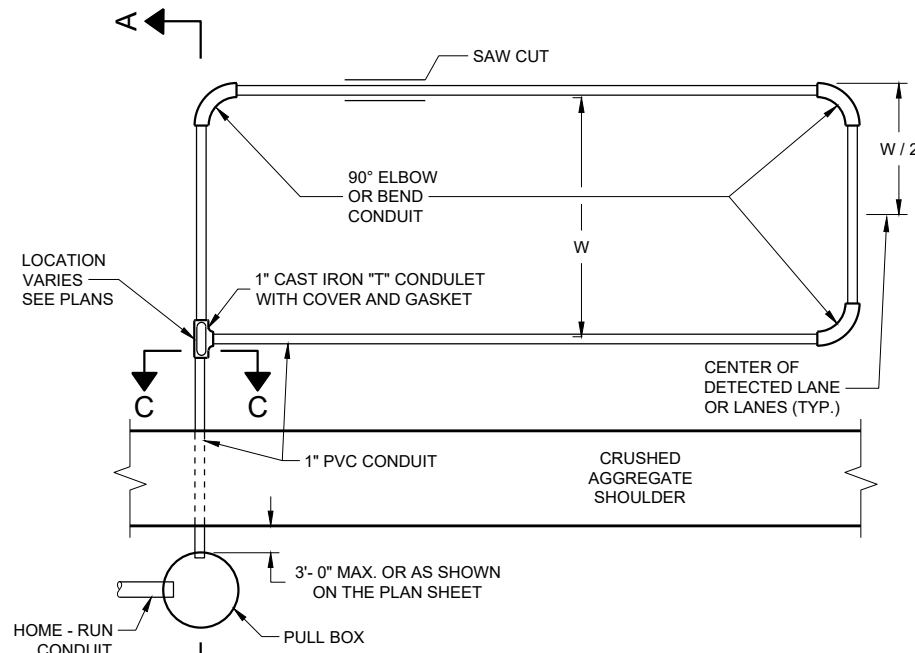
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

BEFORE PLACING THE 1 INCH CONDUIT IN THE CLEANED OUT SLOT, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY 1/2 INCH.

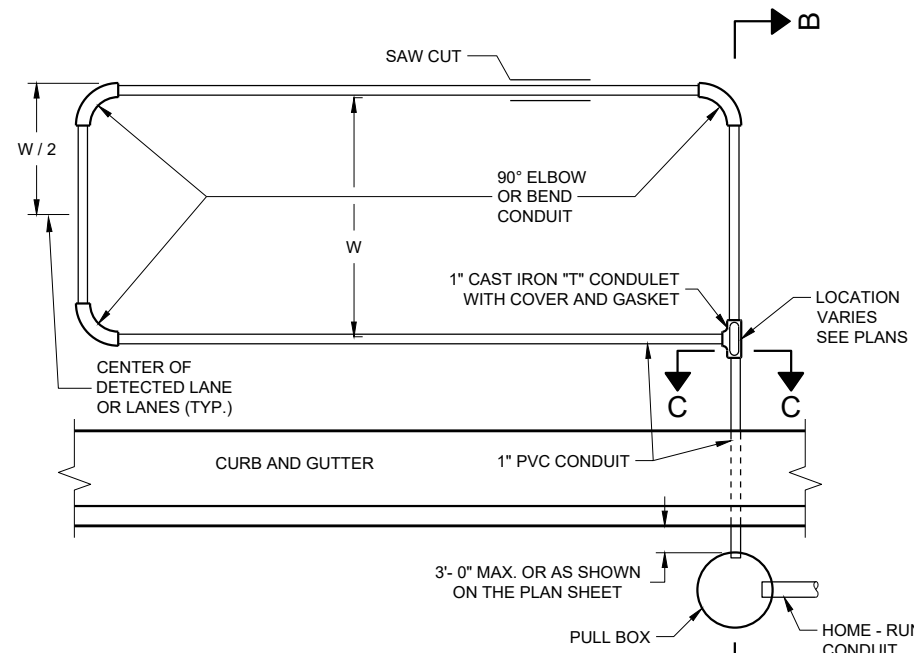
ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

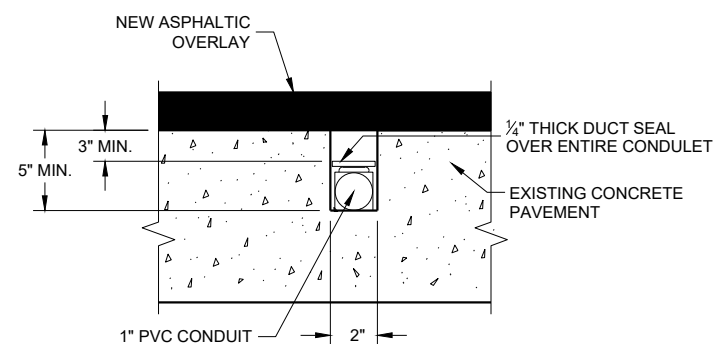
IN THE EVENT HIGH PERFORMANCE COLD PATCH IS NOT AVAILABLE, AND FLEXIBLE TYPE EPOXY IS USED AS A LOOP SLOT FILLER, THE 2 INCH SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION. EPOXY USE SHALL BE APPROVED BY THE DISTRICT ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED AFTER WRITTEN APPROVAL BY THE PROJECT ENGINEER.



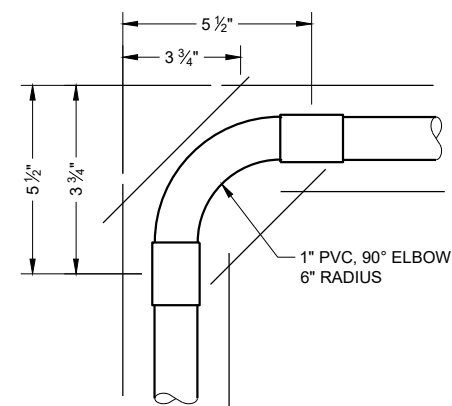
TYPICAL PLAN OF LOOP DETECTOR



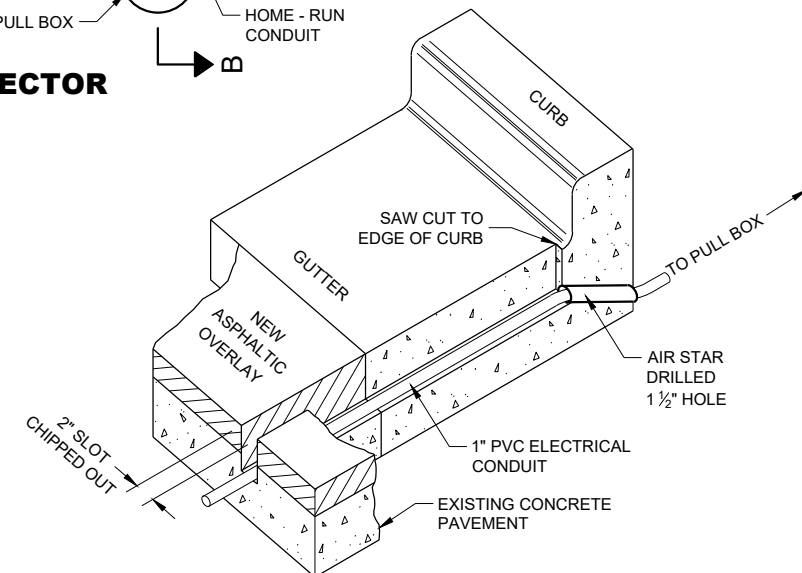
TYPICAL PLAN OF LOOP DETECTOR



**SIDE VIEW
SECTION C - C
LOOP DETECTOR SLOT DETAIL**



**TOP VIEW
CORNER SAW SLOT DETAIL**



**ISOMETRIC VIEW
TYPICAL SAW CUT DETAIL
FOR LEAD-IN CONDUIT**

LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER
FHWA

*Loop Detector Installed in Existing Concrete Pavement with New Asphaltic Overlay***References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols

[Standard Spec. 655](#) Electrical Wiring

[Standard Spec. 675](#) Controllers and Detectors

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
652.0800	Conduit Loop Detector	LF
652.0900	Loop Detector Slots.....	LF
653.0100 - 0150	Pull Boxes Steel (inch)	EACH
653.0151 - 0179	Pull Boxes Non-Conductive (inch)	EACH
655.0700	Loop Detector Lead In Cable.....	LF
655.0800	Loop Detector Wire	LF

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

Other SDDs associated with this drawing:

SDD 9B2	Conduit
SDD 9B4	Pull Box
SDD 9B16	Pull Box Non-Conductive

Design Notes:

NONE

Contact Person:

Ahmet Demirbilek (414) 220-6801